MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2015/2016

TSO7021- SERVICE ORIENTED ARCHITECTURE USING WEB SERVICES

(All sections / Groups)

23rd SEPTEMBER 2015
8:00 P.M. – 10:00 P.M.
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 3 pages (including cover page) with 4 Questions only.
2. Attempt **ALL** questions. All questions carry equal marks and the distribution of the marks for each question is given.
3. Please print all your answers in the Answer Booklet provided.

Question 1

(a) How do web services differ from application service providers and web based applications? Identify TWO main differences. (4 marks)

(b) What is service granularity? Give examples of typical fine grained and coarse grained services (ONE each). (4 marks)

(c) What is the purpose of as-is process analysis? (2 marks)

Question 2

(a) How does a web service development methodology compare to traditional methodologies, such as object oriented analysis and design and component based development? (2 marks)

(b) Define a schema for handling requests for the reservation of rental vehicles. The schema should assume that the customer has already decided to use a specific rental branch. It defines all the information that is needed when requesting information about a vehicle rental. (8 marks)

➢ The schema should include information such as rate codes, rate type, promotional descriptions, and so on, as well as rate information that had been supplied in a previous availability response, along with any discount number or promotional codes that may affect the rate. For instance, the customer may have a frequent rental number that should be associated with the reservation. Typically rates are offered as either leisure rates or corporate rates. The schema should also define the rental period, as well as information on a distance associated with a particular rate, e.g., limited or unlimited miles per rental period, and customer preferences regarding the type of vehicle and special equipment that can be included with the reservation of a rental vehicle.

Question 3

(a) Describe the parts of the Web services <wsdl:binding> element. (2 marks)

(b) How does a notification operation differ from a solicit-response operation? (2 marks)

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(c) Define and design a simple inventory checking service. The inventory service should check the availability of an item. Based on this check the inventory service should respond that either the purchase order could be fulfilled or by issuing a fault stating that the order cannot be completed. (6 marks)

Question 4

(a) What is the Business Process Modeling Notation and what is its goal? (2 marks)

(b) What is operational and what is tactical service management? (2 marks)

(c) The most prominent functions of service management include the metrics/ performance indicators. Provide examples of TWO key operational metrics of a web service at the operational level. (2 marks)

(d) UDDI defines a data structure standard for representing company and service description information. Provide a high level view of the UDDI data structures. (2 marks)

(e) Compare Service-oriented Architecture (SOA) with Cloud Computing solutions and identify TWO similarities and TWO differences. (2 marks)

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